HITACHI
CIRCUIT AND ALIGNMENT SHEET
FOR MODELS CP2146TA
CP2546TA
CP2846TA

X831084
CP 48543
ALIMENTAZIONE BASE DI TEMPI CP2146TA
CIRCUITO DEL SINTONIZZATORE
**PICTURE AND CONTROL ADJUSTMENTS**

**AGC Adjustment:**
1. Switch T.V. on and allow to warm up for at least two minutes.
2. Receive a signal with a level of 47dBm.
3. Connect a voltmeter to the AGC terminal of tuner, i.e. +ve leg of C105 and Ground.
4. Adjust VR202 until meter reads 8V ± 0V.

**HT Adjustment:**
1. Switch T.V. on, receive Philips circle test pattern, and set contrast and brightness levels to maximum.
2. Connect a voltmeter between the +ve leg of C355 and Ground.
3. Adjust VR765 so that meter reads as follows:
   - CP2144TA models: +10V ± 0V
   - CP2262SA/TA models: +12V ± 0V

**Horizontal Phase/Vertical amplitude/Horizontal amplitude:**
1. Receive Philips circle test pattern.
2. Set brightness and contrast levels to maximum.
3. Adjust VR301 to centrelise circle pattern.
4. Connect the fuling lead (FR01) to the pin which achieves the best vertical centring position.
5. Adjust VR161 to obtain the required vertical height.
6. Return brightness and contrast levels to the previous levels.
7. Adjust VR251 so that the vertical lines at each side of the screen are as straight as possible.
8. Adjust VR752 until the castellations at each side of the screen just disappear.
   - N.B. Steps 7 and 8 do not apply to CP2144TA models.

**Focus Adjustment:**
1. Receive Philips circle test pattern setting colour level to minimum, and contrast and brightness levels to maximum.
2. Adjust contrast so that the first two bars of the colour bar display become black.
3. Adjust brightness so that the 3rd and 4th bars of the grey scale bar display are the same colour black as in step 2.
4. Adjust the focus control (upper control on flyback transformer) to obtain the best overall focus.

**CUT OFF AND SCREEN ADJUSTMENT**

**PREPARATION:**
1. Press the red, green and blue background controls on the L.H.I. close to the positions shown (approximately mid point).

**Component Size**

- Blue
- Green
- Red

**CUT OFF AND SCREEN ADJUSTMENT**

**PREPARATION:**
1. Press the red, green and blue background controls on the L.H.I. close to the positions shown (approximately mid point).

**Anode/Focus a/c Check:**
1. Switch T.V. on and set contrast and brightness levels to maximum.
2. Connect a 22kΩ (20 - 30 Watt) resistor from pin 9 of the flyback transformer to ground.
   - N.B. Use a 290Ω resistor for CP2246TA/CP2246TA models.
3. Check that picture and sound disappear instantly.
4. Switch T.V. off, remove resistor, and wait 10 - 15 seconds.
5. Switch T.V. on again, and check that normal operation is resumed, then return contrast and brightness levels to their original levels.

**POSITION OF ADJUSTMENT CONTROLS**

**WHITE BALANCE**

**PREPARATION:**
1. Set the customer controls as follows:
   - Contrast = 0
   - Colour = 0
2. Receive the white raster pattern.

**METHOD:**
1. Adjust brightness control so that the light output from the white raster reads Y = 0.9 adim on the light meter.
2. Next adjust the red and blue background controls to obtain the white balance as shown below:

   ![White Balance Diagram](https://example.com/white_balance_diagram.png)

**PROTECTION CHECKS**

**High Voltage Limit Check:**
1. Switch T.V. on and set contrast and brightness levels to maximum.
2. Connect a 47kΩ resistor in parallel with R718/R718A and ensure that picture and sound disappear instantly.
4. Switch T.V. on again, check that normal operation is resumed, then return contrast and brightness levels to their original levels.

**POSITION OF ADJUSTMENT CONTROLS**

**ON/OFF SWITCH**

- VR803
- VR802
- VR801